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Patent- und Rechtsanwaltskanzlei

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(54) Method and device for detecting a state of charge of a battery assembly, and battery assembly charge and discharge control device

(57) Variation of the charged amount among battery blocks composing a battery assembly is detected. By subtracting the detected value of the variation from the width between the upper limit value and the lower limit value of the charged amount, the movable range (A~B) of the charged amount is found. The position of the present charged amount (C, star mark) is detected as the state of charge. For example, it is arranged that both ends of the movable range are 0% and 100%, and that the movable range is the full scale. Then, the position of the charged amount on this scale is specified by the ratio %. The detection of the state of charge in which the variation in charged amount and the change of the movable range are considered, is performed, and on the basis of this state of charge, a preferable charge and discharge control is performed.

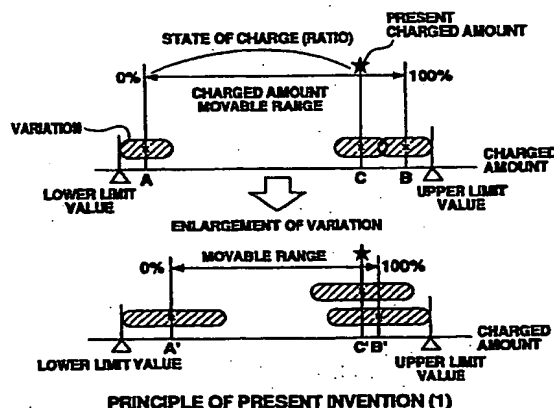


Fig. 3



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# EUROPEAN SEARCH REPORT

Application Number  
EP 98 11 9293

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Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.6)
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A	* abstract *	1-5, 8, 11, 12	
A	& EP 0 926 799 A (MATSUSHITA) * column 2, line 13 - column 3, line 26; figures 4-6 *		
A	US 5 539 318 A (SASAKI) 23 July 1996 (1996-07-23) * abstract; figures 1-6, 12, 17-19 *	1, 2, 5, 7, 11, 12, 14	
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The present search report has been drawn up for all claims			
Place of search <b>THE HAGUE</b>		Date of completion of the search <b>10 February 2000</b>	Examiner <b>Iwansson, K</b>
<p><b>CATEGORY OF CITED DOCUMENTS</b></p> <p>X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document</p> <p>T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons</p> <p>&amp; : member of the same patent family, corresponding document</p>			

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**ANNEX TO THE EUROPEAN SEARCH REPORT  
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